Pharmacological interventions for borderline personality disorder (Review)

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[Intervention Review]

Pharmacological interventions for borderline personality disorder

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ABSTRACT

Background

Drugs are widely used in borderline personality disorder (BPD) treatment, chosen because of properties known from other psychiatric disorders ("off-label use"), mostly targeting affective or impulsive symptom clusters.

Objectives

To assess the effects of drug treatment in BPD patients.

Search strategy

We searched bibliographic databases according to the Cochrane Developmental, Psychosocial and Learning Problems Group strategy up to September 2009, reference lists of articles, and contacted researchers in the field.

Selection criteria

Randomised studies comparing drug versus placebo, or drug versus drug(s) in BPD patients. Outcomes included total BPD severity, distinct BPD symptom facets according to DSM-IV criteria, associated psychopathology not specific to BPD, attrition and adverse effects.

Data collection and analysis

Two authors selected trials, assessed quality and extracted data, independently.

Main results

Twenty-eight trials involving a total of 1742 trial participants were included. First-generation antipsychotics (flupenthixol decanoate, haloperidol, thiothixene); second-generation antipsychotics (aripirazole, olanzapine, ziprasidone), mood stabilisers (carbamazepine, valproate semisodium, lamotrigine, topiramate), antidepressants (amitriptyline, fluoxetine, fluvoxamine, phenelzine sulfate, mianserin), and dietary supplementation (omega-3 fatty acid) were tested. First-generation antipsychotics were subject to older trials, whereas recent

studies focussed on second-generation antipsychotics and mood stabilisers. Data were sparse for individual comparisons, indicating marginal effects for first-generation antipsychotics and antidepressants.

The findings were suggestive in supporting the use of second-generation antipsychotics, mood stabilisers, and omega-3 fatty acids, but require replication, since most effect estimates were based on single studies. The long-term use of these drugs has not been assessed.

Adverse event data were scarce, except for olanzapine. There was a possible increase in self-harming behaviour, significant weight gain, sedation and changes in haemogram parameters with olanzapine. A significant decrease in body weight was observed with topiramate treatment. All drugs were well tolerated in terms of attrition.

Direct drug comparisons comprised two first-generation antipsychotics (loxapine versus chlorpromazine), first-generation antipsychotic against antidepressant (haloperidol versus amitriptyline; haloperidol versus phenelzine sulfate), and second-generation antipsychotic against antidepressant (olanzapine versus fluoxetine). Data indicated better outcomes for phenelzine sulfate but no significant differences in the other comparisons, except olanzapine which showed more weight gain and sedation than fluoxetine. The only trial testing single versus combined drug treatment (olanzapine versus olanzapine plus fluoxetine; fluoxetine versus fluoxetine plus olanzapine) yielded no significant differences in outcomes.

Authors' conclusions

The available evidence indicates some beneficial effects with second-generation antipsychotics, mood stabilisers, and dietary supplementation by omega-3 fatty acids. However, these are mostly based on single study effect estimates. Antidepressants are not widely supported for BPD treatment, but may be helpful in the presence of comorbid conditions. Total BPD severity was not significantly influenced by any drug. No promising results are available for the core BPD symptoms of chronic feelings of emptiness, identity disturbance and abandonment. Conclusions have to be drawn carefully in the light of several limitations of the RCT evidence that constrain applicability to everyday clinical settings (among others, patients' characteristics and duration of interventions and observation periods).

PLAIN LANGUAGE SUMMARY

Drug treatment for borderline personality disorder

Many people with borderline personality disorder (BPD) receive medical treatment. However, there are no drugs available for BPD treatment specifically. A certain drug is most often chosen because of its known properties in the treatment of associated disorders, or BPD symptoms that are also known to be present in other conditions, such as depressive, psychotic, or anxious disorders. BPD itself is characterised by a pervasive pattern of instability in affect regulation (with symptoms such as inappropriate anger, chronic feelings of emptiness, and affective instability), impulse control (symptoms: self-mutilating or suicidal behaviour, ideation, or suicidal threats to others), interpersonal problems (symptoms: frantic efforts to avoid abandonment, patterns of unstable relationships with idealization and depreciation of others), and cognitive-perceptual problems (symptoms: identity disturbance in terms of self perception, transient paranoid thoughts or feelings of dissociation in stressful situations). This review aimed to summarise the current evidence of drug treatment effects in BPD from high-quality randomised trials.

Available studies tested the effects of antipsychotic, antidepressant and mood stabiliser treatment in BPD. In addition, the dietary supplement omega-3 fatty acid (commonly derived from fish) which is supposed to have mood stabilising effects was tested. Twenty-eight studies covering 1742 study participants were included.

The findings tended to suggest a benefit from using second-generation antipsychotics, mood stabilisers, and omega-3 fatty acids, but most effect estimates were based on single study effects so repeat studies would be useful. Moreover, the long-term use of these drugs has not been assessed. The small amount of available information for individual comparisons indicated marginal effects for first-generation antipsychotics and antidepressants.

The data also indicated that there may be an increase in self-harming behaviour in patients treated with olanzapine. In general, attention must be paid to adverse effects. Most trials did not provide detailed data of adverse effects and thus could not be considered within this review. We assumed their effects were similar to those experienced by patients with other conditions. Available data of the studies included here suggested adverse effects included weight gain, sedation and change of haemogram parameters with olanzapine treatment, and weight loss with topiramate. Very few beneficial effects were identified for first-generation antipsychotics and antidepressants. However, they may be helpful in the presence of comorbid problems that are not part of BPD core pathology, but can often be found in BPD patients.

There are only few study results per drug comparison, with small numbers of included participants. Thus, current findings of trials and this review are not robust and can easily be changed by future research endeavours. In addition, the studies may not adequately reflect several characteristics of clinical settings (among others, patients' characteristics and duration of interventions and observation periods).